



Product Data Sheet

E 'Manual metal-arc welding'

OK 67.60

Signed by Claes Gillenius	Approved by Tapio Huhtala/Barbro Karlström	Reg no EN002048	Cancelling EN001089	Reg date 2004-06-07	Page 1 (2)
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REASON FOR ISSUE

Approvals revised.

GENERAL

Acid-rutile coated MMA-electrode giving an overalloyed weld metal. Suitable for welding stainless steel to mild and low alloyed steels. Also suitable for welding of transition layers when surfacing mild steel with stainless steel weld metal.

Min AC OCV: 55
Polarity: DC+, AC

Alloy Type: Austenitic CrNi
Coating Type: Acid Rutile
Ferrite Content: FN 12-22

WELDING POSITIONS



CLASSIFICATIONS Electrode

EN 1600	E 23 12 L R 3 2
SFA/AWS A5.4	E309L-17
ISO 3581	E 23.12 L R
CSA W48	E309L-17
Werkstoffnummer	1.4332

APPROVALS

CL	EN 1600
CWB	CSA W48
Sepros	UNA 409820
UDT	EN 1600
VdTÜV	00898

CHEMICAL COMPOSITION

All Weld Metal (%)

Compound	Min	Max
C		0.030
Si	0.50	0.90
Mn	0.50	1.20
P		0.025
S		0.020
Cr	23.0	25.0
Ni	12.0	14.0
Mo		0.3
Cu		0.3



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MECHANICAL PROPERTIES OF WELD METAL

Properties	All Weld Metal			
	ISO		AWS	
	Min	Typ	Min	Typ
Rp0.2 (MPa)	380	470	380	
Rm (MPa)	520	580	520	
A4-A5 (%)	27	32	30	
Z (%)		50		50
Charpy V at 20°C (J)	40	50		
Charpy V at -10°C (J)	32	40		
	Comments: Elongation = A5		Comments: Elongation = A4	

Comments:

Interpass temperature max. 150 °C.

Hardness weld metal HV 200 - 225

ECONOMICS & CURRENT DATA

Dimension (mm) Ø x Length	Current (A)		W	η	N	B	H	T	U
	Min	Max							
2.0 x 300	30	60	1.3	115	0.60	136.0	0.70	38	27
2.5 x 300	50	90	2.0	115	0.60	85.0	1.10	38	28
3.2 x 350	90	120	3.8	115	0.60	45.0	1.60	51	29
4.0 x 350	130	180	5.7	115	0.60	29.0	2.50	51	31
4.0 x 450	130	180	7.3	115	0.60	23.0	2.50	65	31
5.0 x 350	160	240	9.0	115	0.60	19.0	3.30	58	32

W = Weight (kg / 100 electrodes)

η = Efficiency (g weld metal x 100 / g core wire)

N = Effective value (kg weld metal / kg electrodes)

B = Changes (number of electrodes / kg weld metal)

H = Deposit rate at 90% of max current (kg weld metal / hour arc time)

T = Fusion time at 90% of max current (s / electrode)

U = Arc voltage (V)

OTHER DATA

Redrying: 350 °C, 2h.